CLEAN ENERGY COUNCIL

QUEENSLAND ELECTION 2020 CLEAN ENERGY RECOMMENDATIONS

LOW-COST, CLEAN ENERGY SUPERPOWER

Queensland's clean energy resources are the envy of the world. At the dawn of a new decade and in response to the deep economic impact of COVID-19, the Sunshine State has the opportunity to exploit these natural advantages to bring down the cost of electricity for households and businesses, and position the state as the natural home of energy-intensive industries in Asia Pacific.

CLEAN ENERGY QLD ELECTION 2020 RECOMMENDATIONS

Today, Queensland's residential electricity prices remain high. Meanwhile, renewable energy accounts for just 14 per cent[1] of Queensland's electricity output – the lowest in Australia. With political leadership, this can change.

By exploiting the state's world-class solar resources and its wind resources, Queensland can grow its renewable energy industry while producing Australia's cheapest electricity. Renewable energy can be complemented by existing flexible generation sources, as well as new investments in storage technologies to balance the grid.

This cheap, clean electricity can cut the cost of living for households and businesses, and support the competitiveness and expansion of local mining, minerals processing and industrial manufacturing. It can also be exported to the power-hungry southern states and, ultimately, our resource-poor Asian neighbours who are looking for suppliers of low-cost, clean hydrogen.

Since 2017, over $3.2 billion has been invested in new large-scale clean energy projects in regional and rural Queensland communities, with approximately 4000 large-scale construction jobs created at peak. Around a further 4000 people are employed in rooftop solar installation and the supporting supply chain, including equipment supplies, logistics, sales, marketing and administration.

Around 5500 MW of large-scale renewable energy generation is needed between now and 2030 to meet Queensland's target of 50 per cent renewable energy[2], which could attract almost $10 billion of private investment and create more than 10,000 jobs. Investors stand at the ready, with around 17,000 MW of new large-scale renewable energy projects having already secured planning approvals.

Investment, however, has slowed dramatically in the past year due to the many complex hurdles for connecting new power supply, constraints on many operating solar and wind farms and inadequate transmission connections. The lack of long-term federal energy policy has also played a material role in this slow down, with the 2020 Renewable Energy Target now delivered and no clear federal policy going forward.

But with strong State Government leadership to manage the transition, facilitate private investment and expand the market for the state's low-cost clean energy, this decline can be reversed. In the process, the renewable energy sector can also play a big role in jumpstarting economic activity and jobs across the state following the impacts of COVID-19, while accelerating Queensland's transition to become a clean energy superpower.

[1] As at 31 December 2019

[2] Based on modelling for the Queensland Renewable Energy Export Panel's Final report, 30 November 2016, https://www.dnrme.qld.gov.au/__data/assets/pdf_file/0018/1259010/qreep-renewable-energy-target-report.pdf

LARGE-SCALE RENEWABLES

1. COMMIT TO A MINIMUM 50 PER CENT CLEAN ENERGY TARGET FOR 2030

Roughly 8 GW of old coal-fired power stations are due to retire from the National Electricity Market by the early 2030s, meaning that large amounts of new electricity generation capacity must be planned and built in the next 10 years.

This is an enormous opportunity for new investment, employment and diversified income streams for Queensland's regional communities. If Queensland does not get on the front foot to seize this opportunity, the jobs and investment will flow to other states.

New renewable energy generation is cheaper, cleaner and quicker to build than thermal generation, and will underpin Australia's transition to a low-emission economy.

Clean energy investors are not seeking new subsidies. What they require is clear, stable and strong energy policy to give them the confidence to invest in these long-term assets. It is therefore fundamental that any Queensland Government commits to a minimum 50 per cent renewable energy target for 2030, with a view to building momentum to achieve a 100 per cent target or greater in subsequent years.

Delivering on this target will deliver new economic activity, jobs and income in regional areas, and will continue to put downward pressure on electricity prices.

The target, supported by clear timeframes and plans for the managed retirement of ageing coal-fired power stations, will enable investors, governments and communities to plan for a smooth transition.

The Queensland Government can use its own purchasing power to accelerate progress towards this clean energy target by updating its procurement policy to ensure that all future contracts stipulate that supply must be sourced from 100 per cent clean energy.

The Government should commit to maintaining transparency on its progress in meeting the target through an online tracker or regular public reporting. Should Queensland fall behind in meeting the target, it should work with industry to ensure the right measures are put in place to bring forward investment.

2. RULE OUT GOVERNMENT FUNDING FOR NEW COAL-FIRED POWER STATIONS

Investors have made it very clear that the lowest-cost and most effective forms of new generation is renewable energy and energy storage. However, policy uncertainty is creating a major challenge and undermining this continued new investment, resulting in a 90 per cent collapse in financial commitments to new large-scale investment in Queensland year on year from 2018 to 2019.

The lack of long-term national energy policy is further exacerbated by the Federal Government's openness to funding new coal-fired generation. This creates further uncertainty for investors in new energy generation in Queensland. To address this, the Queensland Government must commit to not supporting such a project, which would come at considerable cost, undermine new investment, result in materially higher power prices in Queensland and unnecessarily increase greenhouse gas emissions.

3. ESTABLISH A 2030 ENERGY STORAGE TARGET TO DELIVER FIRM CLEAN POWER, 24/7

Queensland households, businesses and heavy industry can be powered by the sun and wind 24/7 with the support of energy storage. Energy can be stored through pumped hydro facilities, big batteries, or even green gas, such as biogas or renewable hydrogen.

The Queensland Government should establish an energy storage target to support the 2030 energy target, broadly in line with the standard ratio of 1:4 of storage capacity to renewable energy. This target should be technology neutral.

4. DEVELOP A TRANSMISSION STRATEGY TO LAY THE FOUNDATIONS FOR RENEWABLE ENERGY ZONES AND REGIONAL DEVELOPMENT

A strong transmission network is needed to bring new clean energy to market and support low-cost electricity for businesses and households. Queensland's long, skinny and weak network is a significant barrier to new clean energy investment.

Increasing the electricity transfer capacity between Queensland and NSW (a minor expansion is now under way and a further necessary expansion is being considered) and developing a Queensland Transmission Strategy are the key priorities. With more interconnection, North Queensland can take advantage of its energy opportunities and all of Queensland can earn more by exporting to the energy-hungry southern states.

Queensland must accelerate the co-ordinated development of Renewable Energy Zones, so it can continue to attract clean energy projects and new industries and employers to regional areas. The New South Wales Government will pilot a Renewable Energy Zone in central-west NSW, which will involve the state taking the lead in the planning and investment framework. Queensland should adopt a similar approach.

The Queensland Government could provide funding to the relevant network service providers or others to deliver Renewable Energy Zones. Developing a Renewable Energy Zone requires more than transmission investment. A co-ordinated approach to system strength and a streamlined grid connection process are needed.

It should also involve a proactive community and stakeholder consultation program to build a vision and broad community acceptance, and a strategy for building a local 'skills ecosystem' to maximise long-term regional employment outcomes.

Image: Mt Emerald Wind Farm

5. BUILD AND EXPAND QUEENSLAND'S ENERGY-INTENSIVE INDUSTRY, POWERED BY CLEAN ENERGY

With some of Australia's best renewable energy resources, Queensland is in the box seat to generate the lowest-cost power in the country. This would make it a natural home for low emissions, energy-intensive industries, such as aluminium and steel production and minerals processing.

The State Government should commit to the development of an energy-intensive manufacturing strategy aimed at leveraging its wind, solar, pumped hydro and green gas advantages to not only maintain, but greatly expand the competitiveness of its existing minerals and manufacturing sectors.

6. REDUCE RELIANCE ON DIESEL POWER GENERATION FOR LARGE, REMOTE CUSTOMERS

Existing remote standalone power systems serving large remote customers and small communities, typically powered by high carbon diesel generation, can be replaced by a tightly integrated combination of solar, wind and storage that significantly reduces the reliance on liquid fuels.

These systems can cut emissions and improve the supply reliability at competitive costs.

The Queensland Government should develop a new Microgrid Strategy and supporting fund, aimed at accelerating the shift to cleaner, reliable energy supply at competitive costs.

7. BUILD DEMAND AND EXPERTISE FOR A NEW RENEWABLE HYDROGEN INDUSTRY

Renewable hydrogen, which can be produced using just water and renewable electricity, is a clean energy fuel of the future. It could play an important role in the decarbonisation of Australia's energy and industrial sectors as an emissions-free alternative to natural gas for our homes and businesses, to diesel in long-haul heavy vehicles, to natural gas or coal in the production of ammonia, and even to metallurgical coal in the steel-making process.

If Australia can successfully develop and drive down the cost of renewable hydrogen, we could also open the door to a new clean energy export to rival liquified natural gas (LNG), supplying our energy-poor neighbours throughout North Asia and beyond. Queensland's relative proximity to Asia, existing LNG terminals and strong base of skilled energy workers would put it in a strong position to capture any export opportunity that could emerge.

The Queensland Government can support the development of a local supply chain for renewable hydrogen by:

- Establishing a 10 per cent renewable hydrogen blending target for gas distribution networks, and providing support for early pilots and projects.
- Providing support for trials of hydrogen fuel cell transportation with a focus on back-to-base heavy vehicles (eg. bus networks, mining operations) and long-range road and rail transport.
- Promoting and supporting the development of green ammonia and green steel manufacturing sectors.
- Working with industry to identify suitable renewable hydrogen zones/hubs and supporting the acceleration of development approval processes and connection to the electricity and gas network.
- Expanding funding to support renewable hydrogen projects (leveraging vast private sector capital) to build scale, increase learning and drive down costs.

8. DEVELOP CLEAN ENERGY SKILLS, TRAINING AND A WORKFORCE PLAN

The transition to clean energy is already creating a jobs boom across regional and rural Australia. Skilled workers are needed across the many parts of the supply chain, design, construction and operation of clean energy projects. With the right policy settings and procurement standards, up to 75 per cent of job creation through renewable energy could be either local or regional.

Three elements are key to providing clear renewable energy career pathways to both regional and urban Queenslanders:

- energy policy certainty to underpin investor confidence and ensure a steady pipeline of viable projects
- strengthened links between renewable energy developers and local training providers
- integration of renewable energy into regional development and investment plans to ensure that the supply of general and skilled labour matches demand and to ensure that there is a broad-ranging approach to supporting transition in coal regions.

The Queensland Government should establish a taskforce comprising renewable energy businesses, government, unions and training and research bodies to understand and map out the workforce needs and gaps now and in the future and establish clear strategies to address them.

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ROOFTOP SOLAR AND BATTERIES

When it comes to power prices, more and more Queenslanders are choosing to take control of their own destiny. The Government can help them by committing to:

- Providing funding to support stand-alone power systems, microgrids and other community-scale energy assets so that regional Queensland becomes more resilient and energy independent.
- Giving targeted support for community-scale batteries and solar systems for schools, hospitals and other public buildings, especially in remote communities.

1. HELP REGIONAL QUEENSLAND BECOME MORE RESILIENT AND ENERGY INDEPENDENT WITH A MICROGRID STRATEGY AND FUND

Stand-alone power systems, microgrids and other community-scale energy assets can improve safety and reliability, and reduce energy costs for rural and regional Queenslanders. By supporting communities in the move to microgrids, there will be savings and lower electricity prices for all customers – not just those supplied by microgrids. In areas affected by natural disasters, stand-alone power can also help to reduce risks and improve safety.

The Queensland Government should develop a microgrid strategy and a fund to support pilot projects. The fund would help rural and regional Queenslanders become more resilient to drought, bushfires and other natural disasters. It would reduce exposure to high power prices and ensure the smooth introduction of community-owned energy assets to fringe-of-grid areas.

2. SOLAR ROLL-OUT FOR GOVERNMENT BUILDINGS

All Queensland Government buildings – including schools, hospitals, police stations and public offices – should go solar. With record low payback times for solar, the State Government can make the switch to clean energy and save taxpayers' money.

3. ENERGY-AFFORDABLE RENTAL HOUSING

Queenslanders who rent their homes are exposed to increasing electricity prices and find it hard to manage their energy costs.

The Government can reduce electricity bills for low income households by maintaining and expanding the Government's Solar for Renters Trial to support installation of solar PV and battery systems in rental housing and aged care facilities. These initiatives will reduce energy bill pressure and improve the health and well-being of tenants.

4. TARGETED SUPPORT FOR COMMUNITY BATTERIES

Provide targeted support for community batteries, which can be integrated with local networks and microgrids to reduce network costs, improve safety and reliability, reduce electricity costs and enable higher levels of renewable generation to be integrated into the grid.

The Ergon Energy network has the best potential for pilot programs using community batteries, which can be used to strengthen weak parts of the network and as a 'bank' where customers can store their excess solar generation for use at night.

5. TURBO-CHARGING OUR ELECTRIC VEHICLE TRANSITION

The global automotive industry is going electric, and Queensland needs to prepare the necessary infrastructure to support a growing electric vehicle (EV) fleet and encourage a faster transition. This will reduce the state's reliance on global oil prices and supply chains, boost local jobs and economic activity, and cut pollution in our suburbs and towns.

The State Government should provide support to encourage further investment in EV charging infrastructure beyond the EV super highway backbone.